

## CLAIMS

1. A method for outputting both a high frequency data modulated waveform and an RF power output control signal onto a common transmission medium, said method comprising:

transmitting said high frequency data modulated waveform at a first frequency onto said common transmission medium;

transmitting a first control signal indicating a desired RF power output level onto said common transmission medium; said first control signal being transmitted at a second frequency different than said first frequency; and

transmitting a second control signal indicating a desired RF power output level switching time, said second control signal being transmitted at a third frequency different from said second frequency and said first frequency.

2. The method of claim 1 wherein said second control signal comprises an amplitude shift key modulated carrier wave.

3. The method of claim 1 further comprising outputting a DC power signal onto said common transmission medium.

4. The method of claim 1 further comprising transmitting a third control signal comprising a timing reference waveform onto said common transmission medium.

5. A method for accepting both a high frequency data modulated waveform and an RF power output control signal from a common transmission medium, said method comprising:

receiving said high frequency data modulated waveform at a first frequency from said common transmission medium;

receiving a first control signal indicating a desired RF power output level from said common transmission medium; said first control signal being received at a second frequency different than said first frequency; and

receiving a second control signal indicating a desired RF power output level switching time, said second control signal being received at a third frequency different from said second frequency and said first frequency.

6. The method of claim 5 wherein said second control signal comprises an amplitude shift key modulated carrier wave.

7. The method of claim 5 further comprising receiving a DC power signal from said common transmission medium.

8. The method of claim 5 further comprising receiving a third control signal comprising a timing reference waveform from said common transmission medium.

9. In a TDMA system, a method for calibrating a gain of a head end receiver, said method comprising:

monitoring MAC layer control operation to determine an anticipated upstream quiet period;

during said upstream quiet period, measuring signal strength at a measurement point within said receiver; and

determining receiver gain based on said measured signal strength.

10. The method of claim 9 further comprising thereafter adjusting receiver gain to a desired level.

11. In a TDMA system, a method for calibrating a gain of a head end receiver, said method comprising:

monitoring an indication of reception quality;

upon an indication of excellent reception quality, disconnecting a selected one of at least two antennas;

while said selected one antenna is disconnected, measuring signal strength at a monitoring point in a receive chain coupled to said selected one antenna; and

determining receiver gain based on said measured signal strength.

12. The method of claim 10 further comprising thereafter adjusting receiver gain to a desired level.

13. A system for outputting both a high frequency data modulated waveform and an RF power output control signal onto a common transmission medium, said system comprising:

a transmitter system that transmits said high frequency data modulated waveform at a first frequency onto said common transmission medium; and

an interface control signal generator system that generates a first control signal indicating a desired RF power output level onto said common transmission medium; said first control signal being transmitted at a second frequency different than said first frequency, and that generates a second control signal indicating a desired RF power output level switching time, said second control signal being transmitted at a third frequency different from said second frequency and said first frequency.

14. The system of claim 13 wherein said second control signal comprises an amplitude shift key modulated carrier wave.

15. The system of claim 13 further comprising a power supply that outputs a DC power signal onto said common transmission medium.

16. The system of claim 13 further comprising a timing source that outputs a timing reference waveform onto said common transmission medium.

17. A system for accepting both a high frequency data modulated waveform and an RF power output control signal from a common transmission medium, said system comprising:

a transmitter system that obtains said high frequency data modulated waveform at a first frequency from said common transmission medium;

an interface control system that receives a first control signal indicating a desired RF power output level from said common transmission medium; said first control signal being received at a second frequency different than said first frequency; and

a power level control system that receives a second control signal indicating a desired RF power output level switching time, said second control signal being received at a third frequency different from said second frequency and said first frequency.

18. The system of claim 17 wherein said second control signal comprises an amplitude shift key modulated carrier wave.

19. The system of claim 17 further comprising a power supply that receives a DC power signal from said common transmission medium.

20. The system of claim 17 further comprising a receiver system that obtains a third control signal comprising a timing reference waveform from said common transmission medium, said third control signal being received at a third frequency different from said first frequency and said second frequency.

21. In a TDMA system, apparatus for calibrating gain of a head end receiver, said apparatus comprising:

a calibration control unit that monitors at the head end MAC layer control operation to determine an anticipated upstream quiet period, that during said upstream quiet period, measures signal strength at a measurement point within said receiver, and that determines receiver gain based on said measured signal strength.

22. The apparatus of claim 21 wherein said calibration control unit adjusts receiver gain to a desired level.

23. In a TDMA system, apparatus for calibrating a gain of a head end receiver, said apparatus comprising:

a calibration control unit that 1) monitors an indication of reception quality, 2) upon an indication of excellent reception quality, disconnects a selected one of at least two antennas, that 3) while said selected one antenna is disconnected, measures signal strength at a monitoring point in a receiver chain coupled to said selected one antenna, and that 4) determines receiver gain based on said measured signal strength.

24. The apparatus of claim 23 wherein said calibration control unit thereafter adjusts receiver gain to a desired level.

25. Apparatus for outputting both a high frequency data modulated waveform and an RF power output control signal onto a common transmission medium, said apparatus comprising:

means for transmitting said high frequency data modulated waveform at a first frequency onto said common transmission medium;

means for transmitting a first control signal indicating a desired RF power output level onto said common transmission medium; said first control signal being transmitted at a second frequency different than said first frequency; and

means for transmitting a second control signal indicating a desired RF power output-level switching time, said second control signal being transmitted at a third frequency different from said second frequency and said first frequency.

26. Apparatus for accepting both a high frequency data modulated waveform and an RF power output control signal from a common transmission medium, said apparatus comprising:

means for receiving said high frequency data modulated waveform at a first frequency from said common transmission medium;

means for receiving a first control signal indicating a desired RF power output level from said common transmission medium; said first control signal being received at a second frequency different than said first frequency; and

means for receiving a second control signal indicating a desired RF power output level switching time, said second control signal being received at a third frequency different from said second frequency and said first frequency.

27. In a TDMA system, apparatus for calibrating a gain of a head end receiver, said apparatus comprising:

- means for monitoring MAC layer control operation to determine an anticipated upstream quiet period;
- means for, during said upstream quiet period, measuring signal strength at a measurement point within said receiver; and
- means for determining receiver gain based on said measured signal strength.

28. In a TDMA system, apparatus for calibrating a gain of a head end receiver, said apparatus comprising:

- means for monitoring an indication of reception quality;
- means for, upon an indication of excellent reception quality, disconnecting a selected one of at least two antennas;
- means for, while said selected one antenna is disconnected, measuring signal strength at a monitoring point in a receive chain coupled to said selected one antenna; and
- means for, determining receiver gain based on said measured signal strength.